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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,662

01/24/2007

Joseph Shamir

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EXAMINER

TON, TRI T

ART UNIT

PAPER NUMBER

2877

MAIL DATE

DELIVERY MODE

10/01/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/563,662	Applicant(s) SHAMIR ET AL.	
	Examiner TRI T. TON	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 65-67 is/are allowed.
- 6) ☒ Claim(s) 38-64 and 68-72 is/are rejected.
- 7) ☒ Claim(s) 45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/21/09, 08/22/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 01/21/09, 08/22/06 have been entered. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Oath/Declaration

3. The Oath and Declaration filed on 01/24/2007 is acceptable.

Abstract

4. The abstract filed on 01/06/2006 is objected because the abstract contains more than 150 words.

Drawings

5. The drawings filed on 01/06/2006. These drawings are acceptable.

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Specification

Claim Objections

6. Claim 45 objected to under 37 CFR 1.75(c) as being in improper form because it depends on cancelled claim 37.

The examiner respectfully suggests revision as follow:

Claim 45. A method according to claim [37] 38, wherein the Gaussian beam is spatially modulated.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 38-64, 68-72 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are drawn to a method of particle size and concentration measurement. The method is abstract instructions. Therefore, the method of particle size and concentration measurement is not a physical thing nor a process as they are not “acts” being performed. As such, these claims are not directed to one of the statutory categories of invention (See MPEP 2106.01), but are directed to nonstatutory functional descriptive material.

It is noted that method of particle size and concentration measurement embodied on an apparatus or other structure, which would permit the functionality of the program to be realized,

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would be directed to a product and be within a statutory category of invention, so long as the apparatus is not disclosed as non-statutory subject matter per se (signals or carrier waves).

In other words, the method needs a physical transform would permit the functionality of the program to be realized, and the method needs to tie to an apparatus to transform the steps “providing, measuring, causing, using”.

Allowable Subject Matter

9. Claims 38-64, 68-72 would be allowable if rewritten or amended to overcome the objection(s) and rejection(s) under 35 U.S.C. 101, set forth in this Office action.

10. Claims 65-67 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter: there was no prior art found by the examiner that suggested modification or combination with the cited art so as to satisfy the combination of all the limitations in claims 38 and 65.

12. As claim 38, the prior art of record taken alone or in combination, fails to disclose or render obvious “providing a focused, synthesized, non-Gaussian laser beam: causing said beam to interact with said particles; wherein said focused, synthesized, non-Gaussian laser beam is a dark beam”, (applicants’ specification page 5, lines 4-6 and page 12, lines 15-16, defines a dark beam is a laser beam that has a dark spot or line at the center of a beam with an otherwise typically Gaussian envelop), in combination with the rest of the limitations of claim 38.

13. As claim 65, the prior art of record taken alone or in combination, fails to disclose or render obvious “the focused, synthesized, non-Gaussian laser beam is a dark beam and means for converting said focused, synthesized, non-Gaussian laser beam are chosen from the following

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group: a combination of a spatial filter and a lens; and a liquid crystal device.”, (applicants’ specification page 5, lines 4-6 and page 12, lines 15-16, defines a dark beam is a laser beam that has a dark spot or line at the center of a beam with an otherwise typically Gaussian envelop), in combination with the rest of the limitations of claim 65.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The reference of Jones, A.R., "Light scattering for particle characterization," Progress in Energy and Combustion Science, 1999, pages 1-53 discloses the fractal treatment of agglomerates, determination of particle shape and measurement of refractive index. However, it does not teach the using of non-Gaussian laser beam and dark beam.

The reference of Lin et al. (U.S. Patent No. 4,806,774), the reference of Turkevich et al. (U.S. Patent No. 5,063, 301), and the reference of Holcomb (U.S. Patent No. 6,084,671), these references do not teach the using of non-Gaussian laser beam and dark beam.

Fax/Telephone Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri T. Ton whose telephone number is (571) 272-9064. The examiner can normally be reached on 10:30am - 7:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Gregory J. Toatley, Jr./
Supervisory Patent Examiner,
Art Unit 2877
1 October 2009

September 18, 2009

Examiner /TTT/